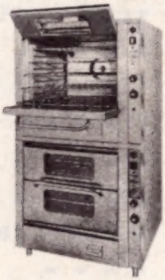
INSTRUCTIONS

Parts List

VECTAIRE CONVECTION TYPE ROAST & BAKE OVENS

Model 115



Model 2-115

Model 115-136

Combines Vectaire with '136' heavy-duty range oven for extra versatility.

the MONTAGUE company

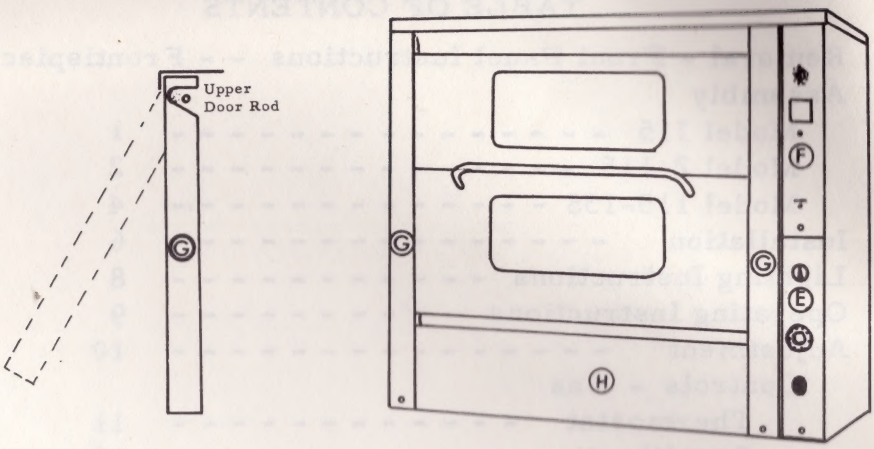
792 Montague Avenue, San Leandro, California

TELEPHONE (AREA CODE 415) 351-9162

TABLE OF CONTENTS

*Model Numbers with "E" - Electric Thermostats
Model Numbers with "G" - Gas Thermostats

Model 115-136 - See Separate Instructions and Parts List for Lower Oven.



REMOVING FRONT PANELS INSTRUCTIONS

Horizontal Door

(Disconnect electrical connections to oven)

(D) Remove Burner Box Panel. (In rear)

(E) Remove lower screw, (Thermostat Dial & Valve Handle must also be removed on Gas Thermostat Models) pull bottom forward and down.

(F) -1- Remove (E)
-2- Remove Thermostat Dial (Electric only)
-3- Pull lower end forward and down to clear top.
-4- Unplug burner light.

(G) Disengage lower screw, pull forward so that top of panel clears upper door rod.

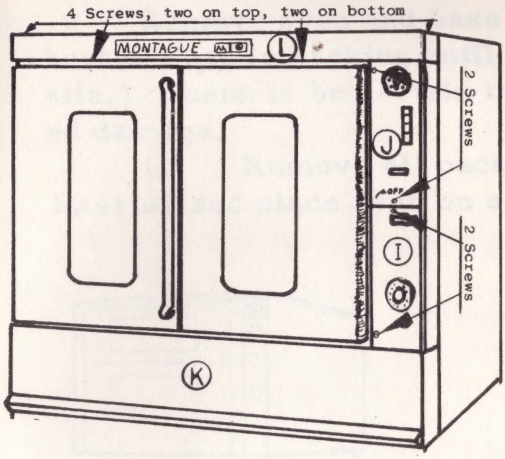
(H) Lift straight up and pull bottom forward.

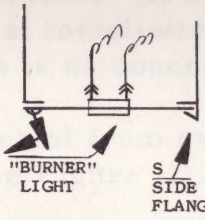
Vertical Door

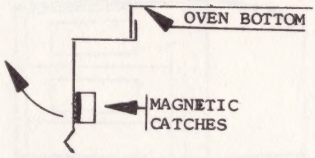
(Disconnect electrical connections to oven)

(I) Remove valve handle & Thermostat Dial on Gas Thermostat. Remove 2 screws, pull left side of panel forward and slide to left. When panel clears right side flange pull forward and off.

(J) Remove Thermostat Dial on Electric Thermostat. Remove 2 screws, pull left side of panel forward and slide to left. When panel clears right side flange pull forward & down. Leads for "Burner" light will have to be removed before panel can be pulled away.

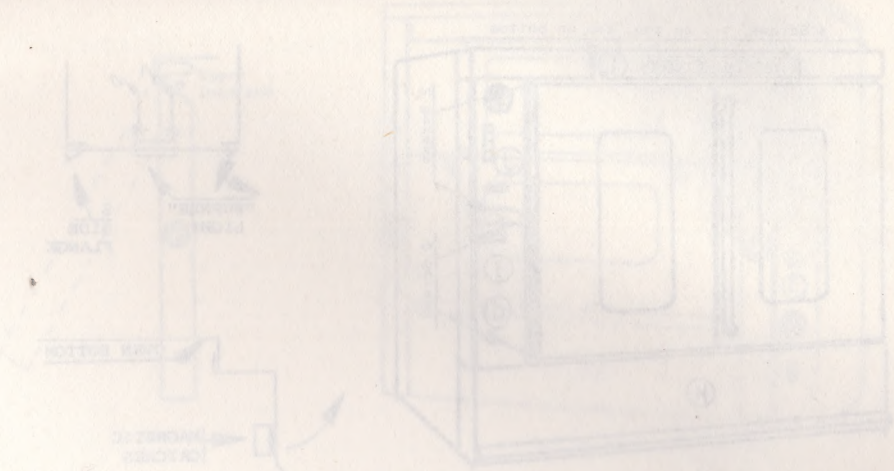






(K) Pull bottom of fire panel forward & up, this will enable lip on top of fire door to clear oven bottom, pull panel forward.

(L) Remove 2 bottom screws, remove 2 top screws.
Double Deck Ovens- - - -
When Top Deck Vertical remove fire door on upper deck, this will let you get to 2 upper screws.
When Top Deck Horizontal remove Left hand gear panel (G) and lower control panel (E) (shown above) to get to top screws, pull panel forward & off.



I. SETTING IN PLACE

Remove oven and base from cartons. (It's best to keep in packing until arrival at installation site.) Check to be certain that there is no concealed damage.

1. Remove all packing material from oven interior and place oven on stand, see Figure (1).

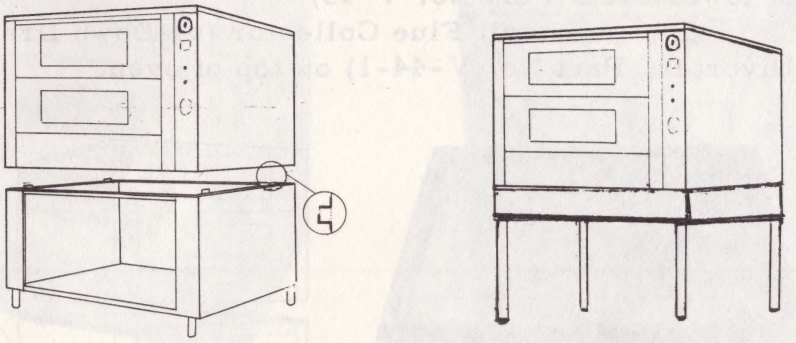


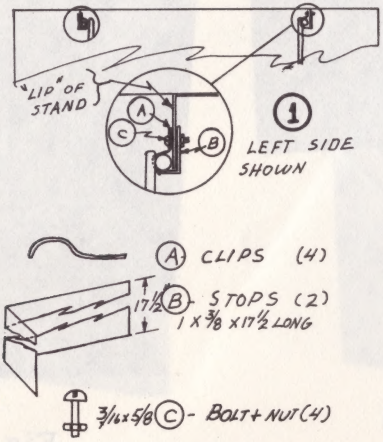
Fig. 1

2. Level by means of adjustable legs.

INSTALLATION OF RACK GUIDES IN BASE

1. Place base upright & before installing top section place one rack guide in place with legs toward rear facing side of base.
2. Install stop (B) behind lip. See (1).
3. Place bolt through clip hole (A) upper lip hole of stand & upper stop hole (B), install nut.
4. Repeat with second clip & lower hole of lip & stop. Tighten both nuts.
5. Repeat with other rack guide on other side.

If opening is too small to allow racks to enter, lip may be bent toward side to enlarge opening. If opening is too small, bend toward center.



Assembly - Model 2-115

1. Set leg section in place with insulated pad in center.

2. Place lower deck (note lugs on top of lower deck) Unit No. 222 on leg section.

3. Set upper deck in place (unit No. 111)

4. Install Flue Riser on Horizontal Flue of lower oven (Part No. V-45)

5. Install Flue Collector (or Down Draft Diverter, Part No. V-44-1) on top of oven.

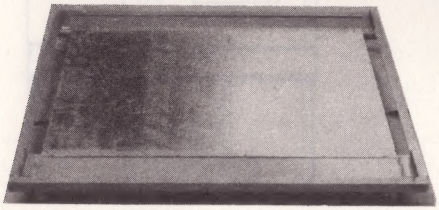
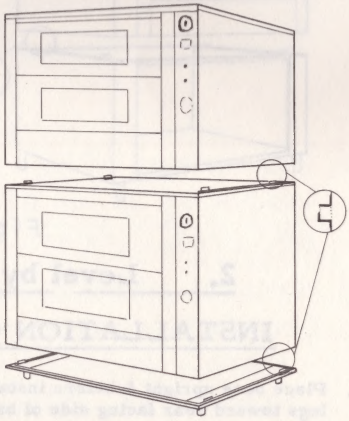


Fig. 1.



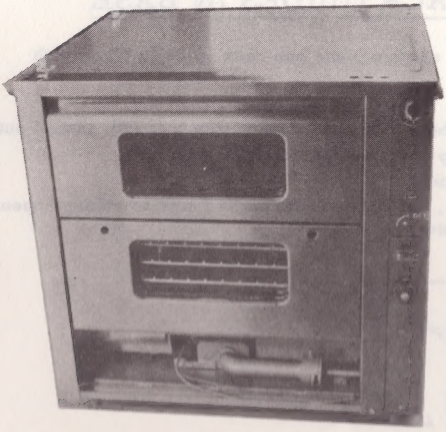


Fig. 2.

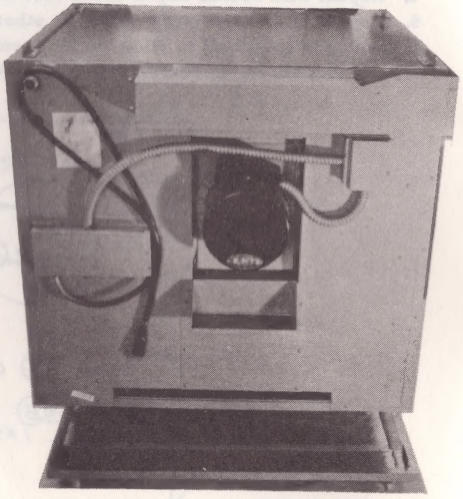


Fig. 2.

Fig. 3.

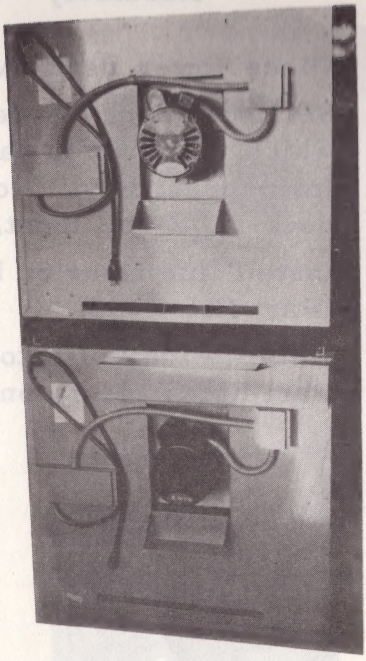


Fig. 3.

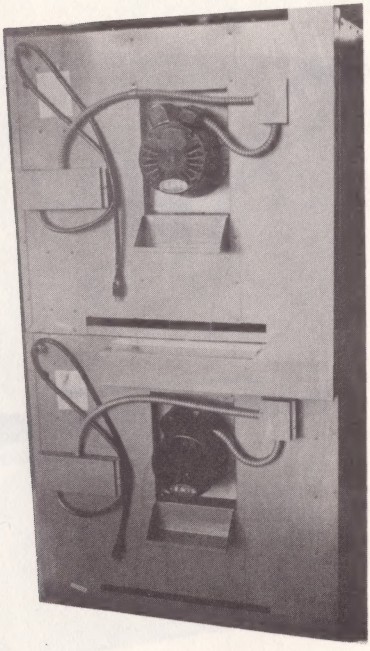


Fig. 4.

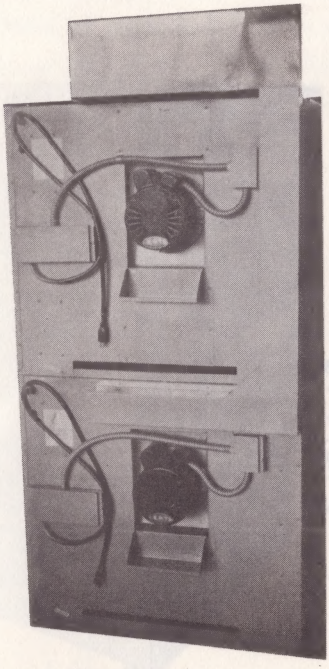


Fig. 5.

1. Place lower deck (Model 138) in position.
2. Set upper deck (Model 115) on top. Two angles which run front to back on lower deck will fit up into upper deck. Note the overhang of upper deck 1 1/2" in front.
3. Install flue riser on horizontal flue of lower oven. (Part No. V-45)
4. Install Flue collector (or down draft Diverter, Part No. V-44-1) on top of oven.

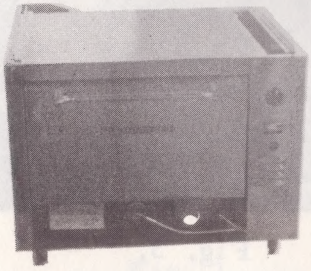


Fig. 1.

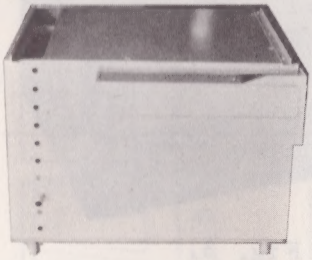
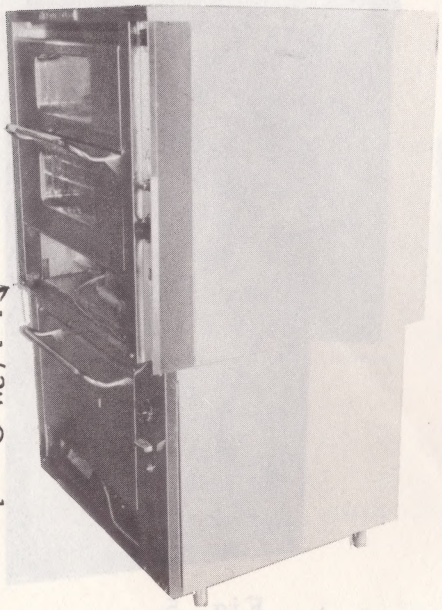


Fig. 1.



1 1/2" Overhang--

Fig. 2.

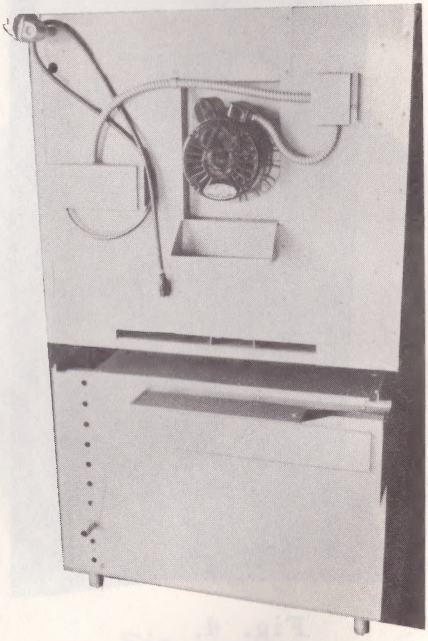


Fig. 2.

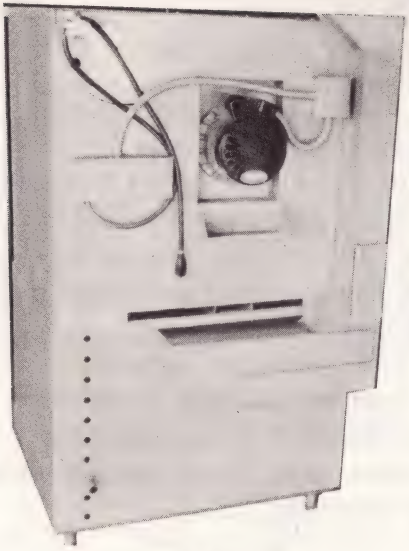


Fig. 3.

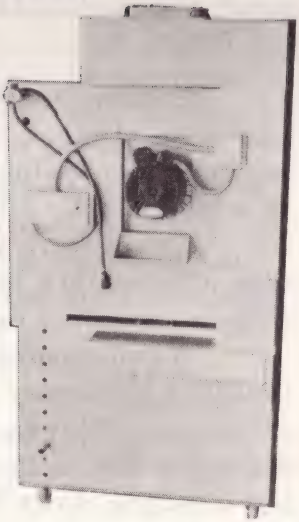


Fig. 4.

II. INSTALLATION

GAS

1. Before installing, be sure that all new piping has been cleaned and purged, to prevent any foreign matter from being blown into the controls by the gas. In some cases, filters or drops are recommended.

Check with your local gas company to be certain of adequate supply, and the correct gas for your oven as marked on the back cover.

When connecting use 3/4" pipe or larger. Smaller size may restrict flow of gas and reduce efficiency of oven. It is advisable to install a shut off valve and union so that oven may be serviced without shutting down the entire kitchen.

ELECTRIC

1. Unless otherwise specified, VECTAIRE is delivered from the factory wired for 110-115V operation. A conventional plug is furnished with the units for 110-115V installations.

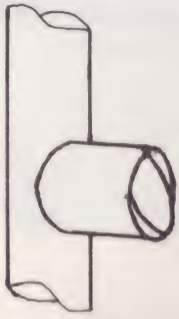
2. This should be plugged into a grounded outlet box of 15 Amp. Minimum capacity for each deck. For 208-230V operation, see diagram for conversion. Wiring to be supplied to oven by others.

VENTING

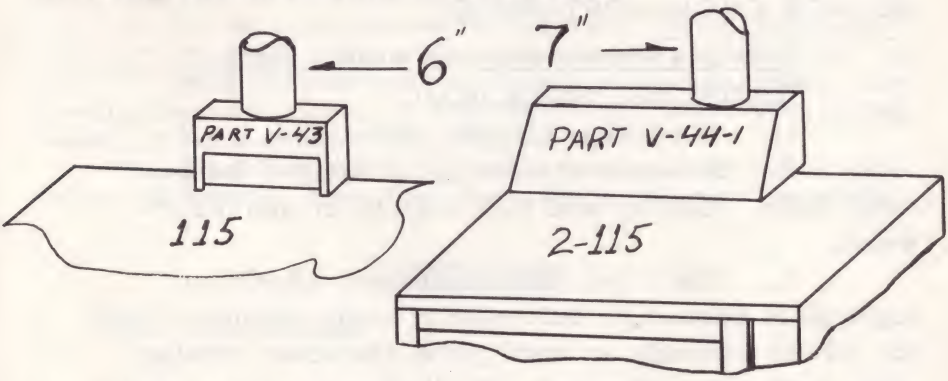
This oven must be installed according to the California codes, or National Board of Fire Underwriters Pamphlet No. 54.

When oven is equipped with a flue deflector or for other than direct venting, oven shall be installed under a mechanically exhausted ventilation hood.

draft Regulator



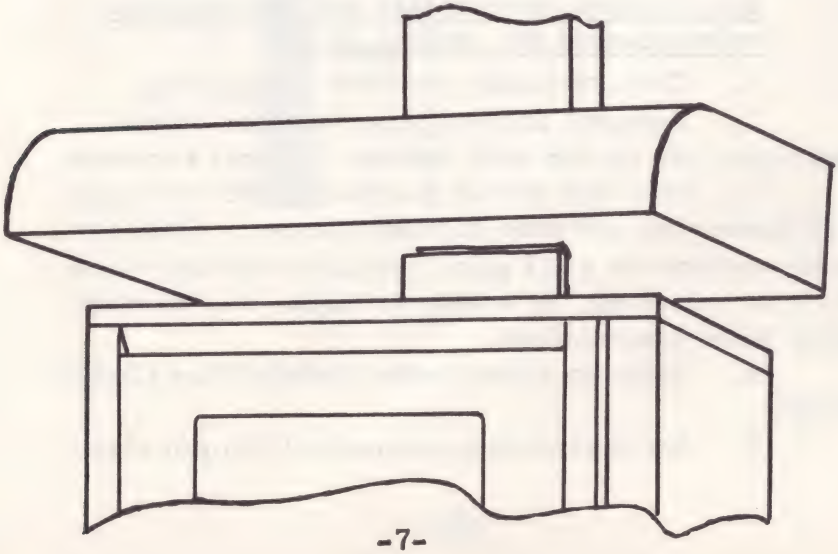
When direct venting unit to an outside stack: (1) Down draft diverter must be installed with a draft regulator as shown. (2)Enough outside air must be admitted to the room compensating for the flue gas plus any air being removed by other ventilation equipment.
NOTE: If these provisions are not made, a negative draft will result causing air to be drawn down the stack. The flue should connect to a stack rising at least 10 ft. above any surrounding structure. Spinner or A-top should be mounted on stack.



(A) Standard hood installation: Set under hood with 6" overhang on each side and front.

(B) Island Installation: 6" overhang should extend on all four sides.

NOTE: Connect hood to proper size fan. (See dealer or local ventilation firm.)



III INSTALLED

After the oven has been installed, all gas and electric connections should be checked. Although this oven has been connected and tested at the factory, the vibrations encountered in shipping may cause some of the connections to work loose.

IV LIGHTING INSTRUCTIONS

IN THE EVENT OF PILOT FAILURE, ALLOW (5) MINUTES SHUT-DOWN FOR UNBURNED GAS TO ESCAPE FROM APPLIANCE.

A. For gas thermostat and safety pilot (Serial No. ending in G):

1. Turn on main gas valve.
2. Remove access panel located below oven door. Lift up and pull bottom of panel forward.
3. Push red button marked BASO and light pilot burner on left side of main burner. Hold for 30-45 seconds or until pilot remains burning when button is released. If pilot goes out, repeat process. If unable to light, see Gas Safety Pilot Instructions.
4. With pilot burning, turn on oven valve and set the thermostat to desired temperature. If necessary, reset minimum flame. (See gas thermostat instructions.)

B. For electric thermostat and gas solenoid valve (Serial No. ending in E):

1. Turn on main gas shut off.
2. Remove access panel located below oven door; lift up and pull bottom of panel forward.
3. Push red button marked BASO and light pilot burner on left side of main burner. Hold for 30-45 seconds or until pilot remains burning when button is released. If unable to light, see Electric Safety Pilot Instructions.
4. Turn on valve below Safety Pilot (Behind Panel).
5. Set thermostat to desired temperature.

V OPERATING INSTRUCTIONS

1. With oven doors shut, turn on oven valve (gas thermostat only), rotate the thermostat to the desired temperature. The Burner ON light should come ON and remain lit until the desired oven temperature is reached.

2. Switch fan to ON, noting that the fans shuts off automatically whenever the oven doors are opened.

3. The oven interior light is switched to ON by means of the switch located on the control panel marked light.

4. Preheat for 10-15 minutes. Note short preheat period.

5. Place food in oven, balancing load as evenly as possible. Make sure pans do not touch sides of oven.

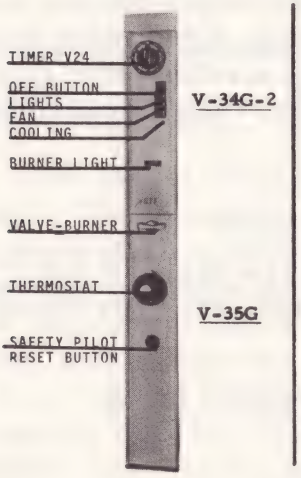
6. Set timer for desired cooking time. Do not turn Manual Timer (V-24) past 60 Min. as this will damage it beyond repair.

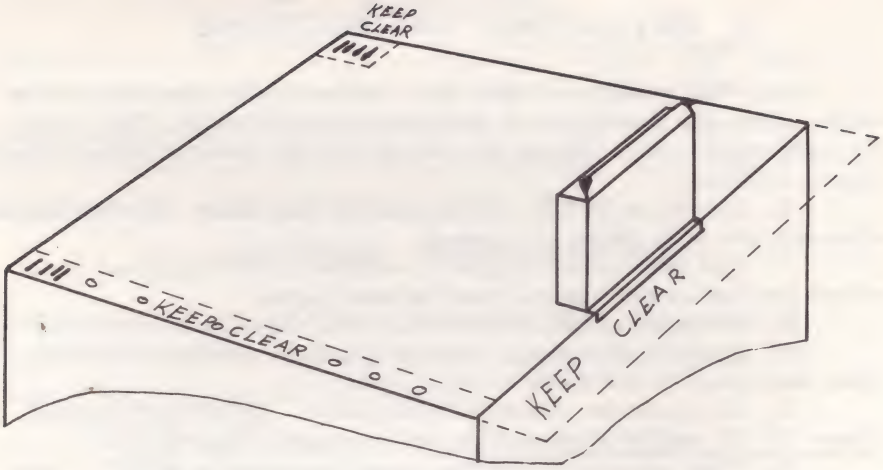
7. When necessary to lower oven temperature rapidly - turn down the thermostat - shut off oven valve - open door - push cooling button. (When oven has cooled, push fan button).

8. To shut down oven - push off button and turn burner valve on Gas Thermostat. Turn Thermostat Dial on Electric Thermostat.

CONTROLS

Gas Thermostat





Keep areas shown in dotted line clear to allow air to flow around controls and motor. This will help prolong the life of your equipment.

VI ADJUSTMENT

AIR MIXTURE: Although preset at the factory, slight variations in gas quality and altitude may necessitate minor adjustment to the venturi air shutter. Loosen machine bolt and slide air shutter left or right. Tighten air shutter bolt.

NATURAL GAS

Oven is equipped with pressure reg. set for 5" Water Column. If regulator not used, size per the following chart.

BURNER ORIFICE DRILL SIZE	INLET PRESSURE INCHES WATER COLUMN	CU. FT. PER HR.
23	10.70	105.9
21	9.40	"
19	8.10	"
17	7.00	"
15	6.00	"
13	5.50	"
11	4.90	"

BURNER ORIFICE DRILL SIZE	INLET PRESSURE INCHES WATER COLUMN	CU. FT. PER HR.
9	4.50	"
7	4.10	"
5	3.90	"
3	3.50	"
2	3.10	"
1	2.85	"
A		"

NATURAL GAS based on 1,085 BTU
(The 105.9 X 1,085 BTU per cu. ft. = 115,000 BTU per hr. using .64 specific gravity gas.)
Orifice Co-efficient .86

LIQUID PETROLEUM GAS

11" Water Column
Propane 2,500 BTU----Drill 31
Butane 3,000 BTU----- " 32

GAS THERMOSTAT: (For S/N ending in "E" see Electric Thermostat)

The Model FDO is a combination Snap-Throttle Thermostat. When the dial is set at a temperature, the thermostat will open wide allowing maximum flame at the burner. As the temperature begins to raise and reach the temperature setting, thermostat begins to throttle the gas, cutting down burner to the amount of gas needed to hold the oven at the temperature set. If the oven is empty or very lightly loaded, the minimum flame of the burner will continue to raise. When this happens, the thermostat snaps the minimum flame off. As the temperature drops, the minimum flame will snap on. With this system it is possible to operate the oven at low temperature and at the same time give you the advantage of a throttling type thermostat

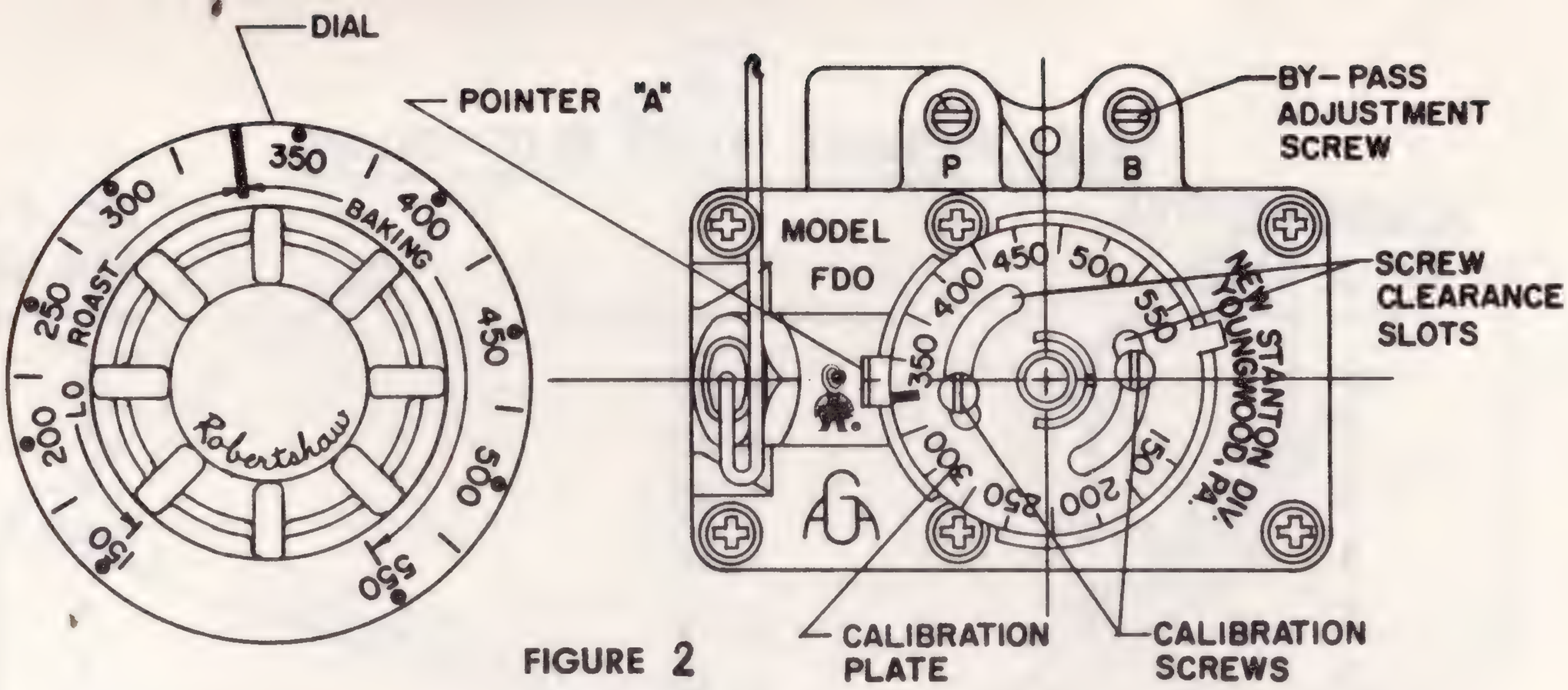


FIGURE 2

By-Pass (Minimum Burner) Flame: (refer to Fig. 2)

This adjustment must be made at the time the appliance is installed. To adjust this flame: (Be sure over burner pilot flame is ignited).

1. With oven cold, turn dial counterclockwise slowly from "off" until main burner gas snaps on.
2. Remove dial.
3. With a screwdriver, turn "by-pass adjustment screw" counterclockwise to increase the by-pass flame or clockwise to decrease it until flame over entire burner is approximately 1/4" high.
4. Replace dial. Caution: While making this adjustment, if the oven should become heated above temperature setting, the by-pass flame will shut off completely. If this occurs, turn dial counterclockwise slowly until by-pass gas snaps on. Then check by-pass adjustment as stated above.

Recalibration

Field recalibration is seldom necessary, and should not be resorted to unless experience with cooking results, definitely proves that the control is not maintaining the temperature to which the dial is set. To check oven temperatures when recalibrating use a Robertshaw Test Instrument or a reliabel mercury oven thermometer. (Refer to Figure 2).

1. Place the thermocouple of test instrument or mercury thermometer in the middle of the oven. Oven should be loaded with food or pan of water to simulate load.

2. Light main burner.

3. Turn dial to 400 mark and allow oven to heat until flame cuts down to by-pass.

4. After burner has been on sufficiently long enough to cut down to by-pass flame, check oven temperature. The control should be recalibrated if your reading is not withing 15 degrees of the dial setting. If recalibration is required, proceed as follows:

5. Remove dial

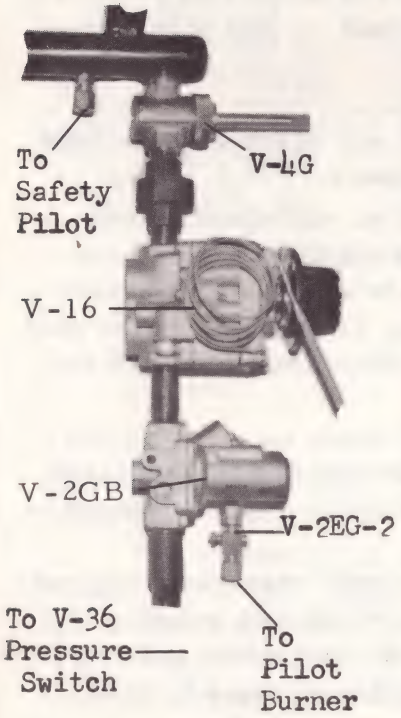
6. With a screwdriver, loosen the two calibration screws until calibration plate moves independently of the control.

7. Turn calibration plate until mark corresponding to test instrument or thermometer reading is in line with center of pointer "A" and while holding in this position, tighten calibration screws firmly.

8. Replace dial.

9. Note:- If the above adjustment is prevented by the two loosened calibration screws being in contact with the ends of the screw clearance slots in the calibration plate, remove the screws and after turning the calibration plate to the proper location, reassemble screws in the other tapped holes designed for them.

GAS SAFETY PILOT (Model C815D-BASO)



Model C815D Baso is an automatic 100% safety pilot which provides complete gas shut off in event of pilot failure. The safety valve is held closed by spring pressure. When red button is pushed by hand, gas flows to pilot. Pilot heats thermocouple creating a very small amount of electricity. This energizes a magnetic coil under red button.and holds valve open, permitting gas to flow to main burner and pilot without holding pressure on red Button. In the event of pilot failure the flow of electricity will stop and spring will stop flow of gas to both pilot and main burner.

PILOT SERVICE IN THE EVENT OF PILOT FLAME FAILURE: (Fig. A)

1. If pilot flame burns yellow, clean pilot orifice and pilot burner to insure a steady, blue flame. The orifice can be cleaned by washing in a solvent such as trichloroethylene and/or blowing out.
2. Flame must surround thermocouple tip for approximately $\frac{1}{2}$ inch.
3. Thermocouple lead connections must be tight, clean, and free of grease. This is an electrical connection.

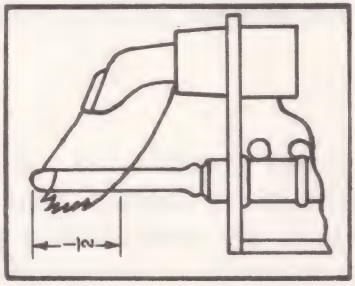


Fig. A.

ELECTRIC THERMOSTAT: (S/N ending in "E")

1. Thermostat is of snap-action, single-line, double-break design with silver contacts and heavy-duty terminals. The power element consists of a stainless steel diaphragm with a capillary tube and bulb filled with a liquid having a high co-efficient of expansion, provides extreme sensitivity to temperature fluctuations. Thus it will operate within very close temperature differential.

2. Each Electric Thermostat is adjusted at the factory and calibrated on precision instruments to control temperatures accurately. Adjustment or recalibration is not needed unless the thermostat has been mishandled in transit, or changed or abused while in service.

To Check Calibration:

A. Use a potentiometer or a good grade thermometer to determine temperature.

B. Turn the dial of the thermostat to a temperature setting of 350 degrees.

C. Allow enough time for temperature to stabilize or until several temperature readings are identical.

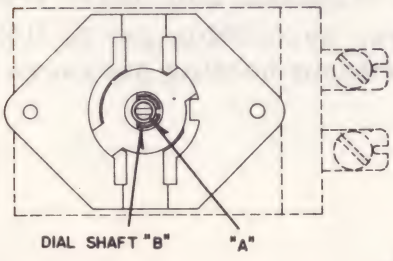
To Recalibrate: (Figure 5)

A. Remove dial from shaft "B".

B. Turn screw "A". clockwise to decrease and counterclockwise to increase. One-quarter (1/4) turn of screw "A" equals 35 degrees F.

C. Replace dial.

After a calibration is made let the appliance operate until the temperature has stabilized, then recheck to determine whether or not the calibration has been corrected.



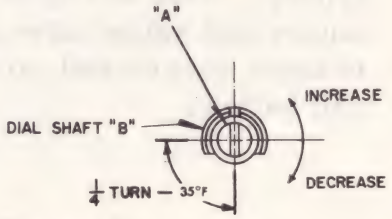
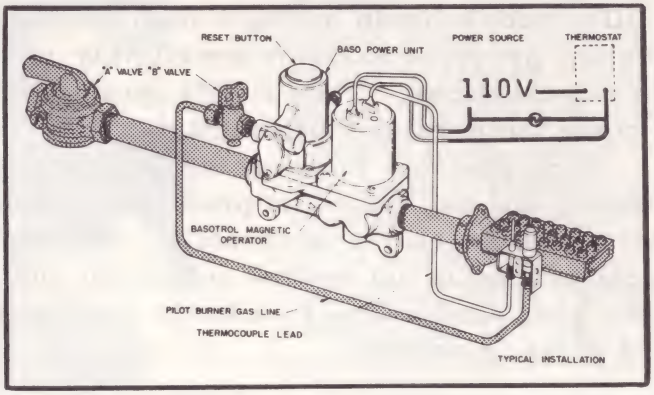


Figure 5

ELECTRIC SAFETY PILOT: (S/N ending in "E")

The electric safety pilot is two valves - one is the 100% safety valve (Baso power unit with red reset button) and one is the electric solenoid valve to turn on and off the main burner.



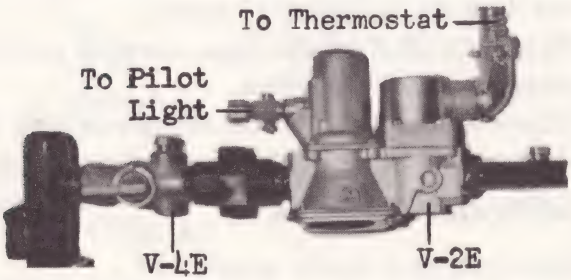


Figure 6.

1. Safety Valve - held closed by spring pressure in closed position. When red button is pushed by hand, gas flows to pilot. Pilot heats thermocouple creating a very small amount of electricity. This energizes a magnetic coil under red button and holds valve open, permitting gas to flow to main burner and pilot without holding pressure on red button.

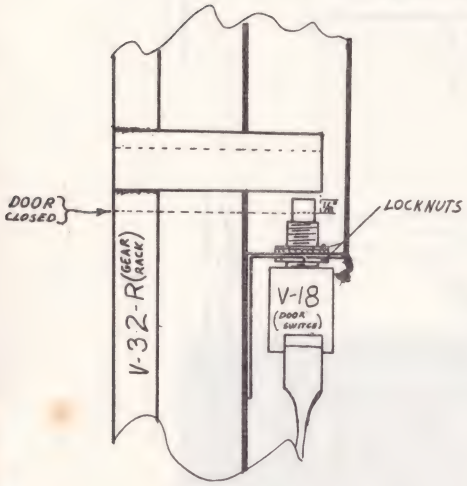
2. Electric Solenoid Valve - held closed by spring pressure. When thermostat is turned on and until thermostat reaches temperature, a complete circuit of 115V current flows to the coil, opening it against the spring and allows gas to flow to burner (providing safety valve is open.) When turned off or when temperature is reached, thermostat opens circuit and spring closes valve since magnetic coil is no longer energized.

Pilot Service in the Event of Pilot Flame Failure:

(See Page 12, Figure A)

TO ADJUST DOOR SWITCH

NOTE: Make sure fan switch & not cooling switch is depressed. Cooling switch bypasses V-18 door switch.



HORIZONTAL DOOR

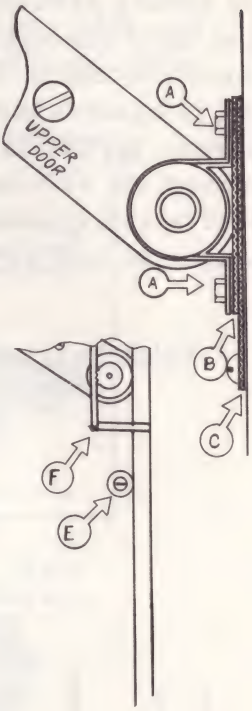
1. Shut off power to oven.
2. Remove upper and lower Control Panel.
3. Loosen Top Locknut.
4. Raise or lower Lower Nut so that when door is closed Switch is pushed down approx. 1/8".
5. Tighten Top Locknut.
6. Replace both Control Panels.

SYNCHRONIZE OVEN DOOR:

1. Remove left & right gear panels.
2. Loosen Bolt "A"(steps 2-5 should apply to both upper bearings.
3. Loosen Bolt holding Bearing "E" so that Gear Rack "F" slacks off enough to allow corrugations to slide up or down on "C"

(If upper door sticks out, raise-- If lower door sticks out, lower)

4. Tighten Bolt "A"
5. Tighten Bolt holding Bearing "E".
6. Check Door Seal, if needed adjust.



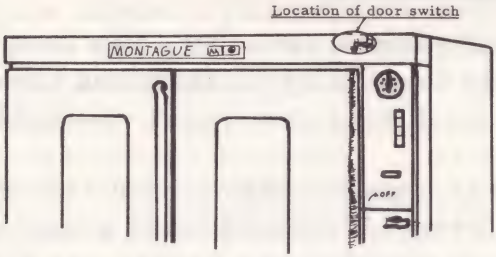
ADJUSTING DOOR SEAL

It is important that the door seal be maintained across entire door but not too tight.

1. Loosen Bolts "D".
2. Doors will slide up or down.
3. Tighten Bolts "D".

NOTE: If after doors are synchronized there is not enough adjustment in bolt holes "D", it will be necessary to loosen Bearing "E", move Gear Rack "F" up or down one tooth as needed. Door will have to be synchronized again.

VERTICAL DOOR SWITCH
(no adjustment necessary)

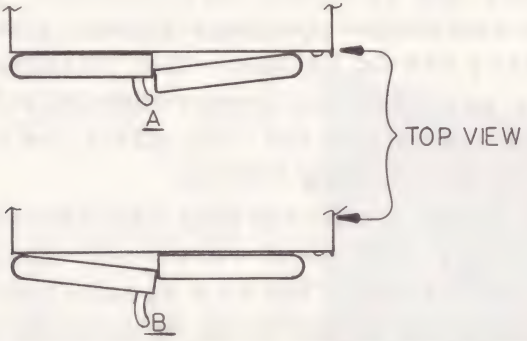


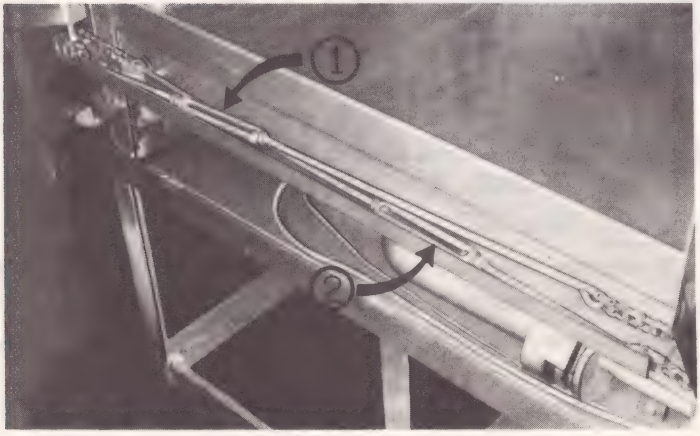
DOOR ADJUSTMENT-VERTICAL DOOR

A Right hand door on oven does not close when left hand door closes. Loosen turnbuckle (1) and tighten (2).

B Left hand door on oven does not close when right hand door closes. Loosen turnbuckle (2) and tighten (1).

Note half turn on turnbuckle equals approx. 1/2" adjustment. When through with adjustment, both turnbuckles should be left flat so as to clear front box panel.





ELECTRIC FAN MOTOR

The customized electric fan motor has been specially manufactured for this application and should under normal conditions give years of trouble-free service.

The unit is supplied with sealed self-contained bearings which require no additional greasing or flushing. A high temperature grease has also been used to increase bearing life and should only be replaced by an authorized service station, when or if necessary. (See separate list)

The motor is equipped with a built-in overload protector which will warn of any over-loads or damaging heat to the motor.

The motor is of an open drip-proof type construction, and as such, care should be given to see that the ventilation openings remain clear. In addition, care should be used when washing down or cleaning equipment to keep water or solvents out of the motor, as these not only affect the windings but may clog the starting switch.

If problems do develop with the motor contact your nearest authorized Service Station, do not attempt repairs yourself. This is a special piece of equipment and should only be serviced by competent persons familiar with the construction.

TO REMOVE MOTOR AND/OR FAN:

(Ovens Manuf. after 1/1/68)

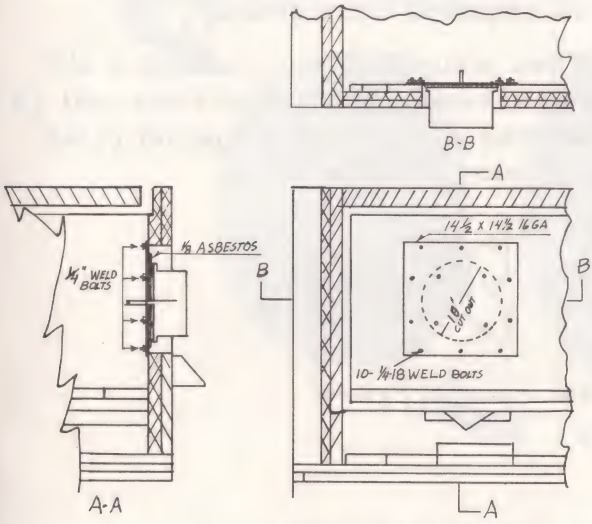
Important; Shut off power to oven.

1. Remove two screws at bottom and two at middle of diffuser panel and swing panel upward.
2. Remove the 10 1/4" bolts holding Plate in back of oven.
3. Pull Plate forward 1 1/4" to 1 1/2" so that motor flange clears 10" cut out in back of oven, then let motor

drop and rest on frame. (The first time this is done the 1/8" thick square asbestos pad between motor and front panel will have to be forced to fit round 10" hole, when installed this pad is square.) Pull motor through hole and rest on oven bottom. Reach behind panel and remove top of electrical box mounted on motor. Disconnect wire & remove flex from motor. (Note how motor is connected, color of wire) motor, panel and fan may then be removed from oven.

4. Remove two Allen screws from fan hub and pull off fan. 2 1/4-20 holes are provided so screws may be inserted and a wheel puller used.

5. Remove four hold-down nuts at motor mounting and remove motor. IMPORTANT: When re-installing motor, be sure to align so that fan will not come into contact with Plate or fan baffle. Check wiring for proper voltage.



VECTAIRE OVEN SHOWING REMOVABLE 14-1/2 x 14-1/2 PLATE FOR REMOVING MOTOR FROM FRONT OF OVEN. MOTOR ATTACHED TO PLATE WITH 4 BOLTS, AS BEFORE.

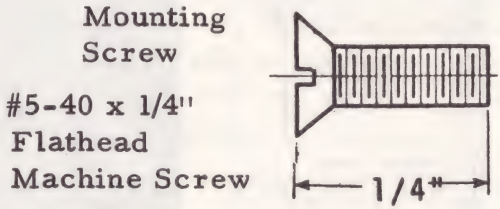
When the manual TIMER fails to ring or operate, it can often be made to function again by the following means:

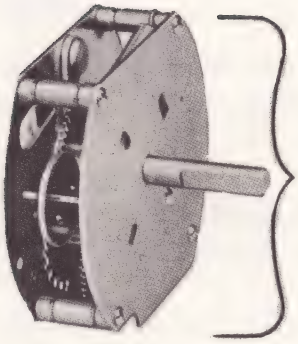
(1) Timer slow or inoperative: Remove timer, clean clock mechanism by dipping in kerosene or other solvent. This not only cleans but lubricates.

(2) Timer functioning but fails to ring when reaching '0': Check to see if rear housing is bent. This can restrict or stop bell hammer from completing it's cycle and prevent ring mechanism from operating.

(3) Timer with short ring: Length of ring is proportionate to time setting. Maximum ring obtained at 60 minutes. NOTE: If long ring desired, turn to 60 minutes; then counter-clockwise to required time setting.

(4) Timer mounting: When mounting, use on 5-40 x 1/4" long flathead machine screws. Longer screws will go through front housing and put pressure against clock mechanism which will stop or slow clock.

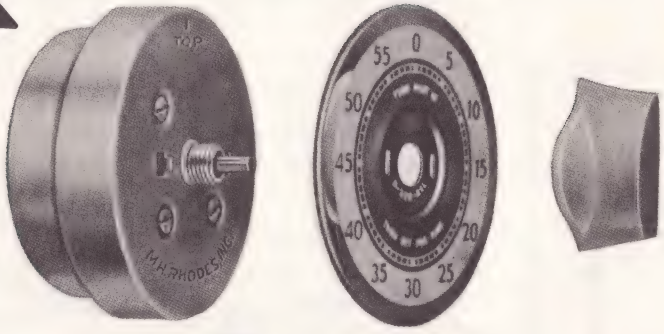




Clock
Mechanism

Rear Housing

Dial



Front Housing

TO INSTALL OVEN INTERIOR LIGHT: Remove the two screws located at the bottom and two in middle of the diffuser panel and swing the panel upward to expose light sockets.

TO REMOVE BURNER:

1. Remove the access plate at the bottom of the door by lifting panel from bottom and pulling forward.
2. After shutting off gas supply, disconnect pilot burner and capillary tube from burner.
3. Remove single screw at front of burner on left side.
4. Slide burner venturi to left of the orifice and pull burner out.

NOTE: Special attention should be given to the condition of removable burner baffle (Part No. V-15). Due to the high BTU of this burner, the baffle, in time, will burn out. Baffle should be replaced before the flame does any damage to the fixed deflector above.

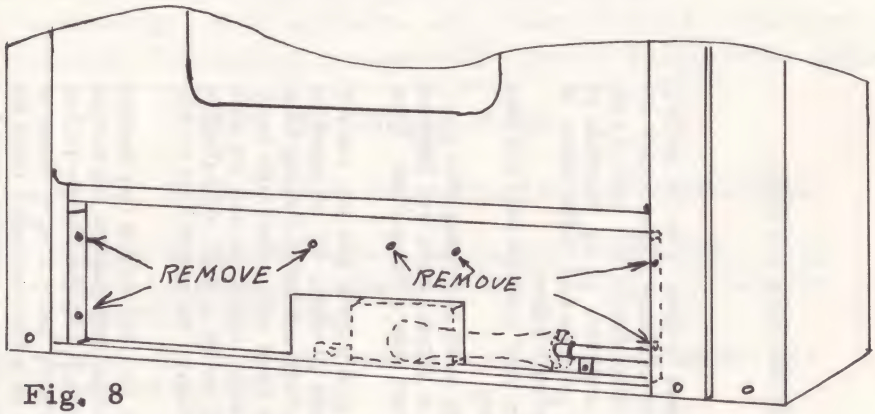


Fig. 8

REMOVE BAFFLE & DEFLECTOR: **(Fig. 8)**

1. Remove access plate at bottom of door.
2. Remove oven burner, pilot and capillary tube (Gas) or Thermocouple (Elec).
3. Remove 7 screws, tilt top of baffle plate forward and pull out to clear orifice and manifold.
4. Pull S/S Deflector (**Part V-15**) out front.

To replace reverse steps.

CLEANING STAINLESS STEEL

Stainless steel is remarkably easy to clean. You can quickly remove fingerprints, dust and ordinary stains simply by rubbing the stainless with a clean damp cloth. And it's no trick at all to remove such stubborn, sticky materials as burnt-on grease, dried food particles and coffee stains, if you follow the suggestions offered below.

With reasonably good care, your stainless steel will stay new-looking for years to come.

Under ordinary conditions, the secret of keeping your stainless surfaces bright as new is simple: light but frequent cleaning, usually with no more than a damp cloth. Then dry with a soft cloth.

For slightly more difficult applications, you may use any of the following: (1) ammonia in water, (2) detergent in water, or (3) special solvents, such as alcohol, baking soda, vinegar or turpentine. Follow these with a thorough washing with detergent and hot water, then rinse and dry with a soft, clean cloth. For a high polish, apply a mild abrasive cleanser and rub in the direction of the polish lines to preserve the original finish.

Foods that burn and stick on other metals can discolor stainless, too. But with a stainless steel unit you can remove discolorations by applying a mildly abrasive cleanser such as Bon Ami. To soften an extremely heavy layer of burnt-on grease, cover the layer with an ammonia-soaked cloth for 10 to 15 minutes. You might also use a plastic or stainless steel sponge. Then wash, rinse and dry as usual.

You can eliminate fingerprints on highly polished surfaces by applying a commercial glass cleaner or automobile wax. After you remove the excess cleaner with a soft cloth, a thin protective film remains. If some fingerprints do appear later, they can be easily wiped away with a cloth containing some of the cleaner.

PRECAUTIONS

1. Strong bleaches tend to corrode many materials and should not come in contact with stainless steel sinks or utensils longer than 30 minutes. When these chemicals are used, the stainless should be rinsed thoroughly.
2. Tincture of iodine or iron should not remain in contact with stainless surfaces. These solutions, which cause stainless to discolor, should be rinsed off immediately after contact.
3. Some foods, such as mustard, mayonnaise, lemon juice, vinegar, salt, or dressings containing these, will attack and corrode stainless. You should never store them in stainless containers.
4. Ordinary steel wool should be used sparingly to clean stainless; particles may lodge in the surface and rust. Allowing the wool to rest on a stainless surface may cause a rusty appearance. For difficult cleaning jobs such as removing burned-on foods, stainless steel "sponges" or pads are recommended. When cleaning a highly-polished, mirror finish with a metal pad, be especially careful that it does not scratch the finish.
5. Gritty, hard abrasives will mar a stainless finish and are not recommended.
6. Sharp knives or choppers usually have hard carbon steel edges and will leave their mark on stainless surfaces.

With only a little care, your stainless steel equipment and utensils will remain clean and bright for years to come. Stainless is a hard, rust-resisting metal that adds beauty and lustre to countless household products.

GENERAL CLEANING

The complete oven should be given a periodic general check-up. Lint and grease suspended in the air tend to collect in passages. Therefore, all flues; air passages; burner ports; primary air openings; etc., should be periodically cleaned to prevent clogging.

EXTERIOR: Wash painted surfaces with mild soap and water, drying with clean cloth. For S/S surfaces, see Stainless Steel section.

INTERIOR: Remove side rack guides. Scraper, wire brush and steel wool may be used on hard accumulations.

NOTE: Commercial oven cleaner can be used but special care should be given to thoroughly drying afterwards.

To clean behind baffle: remove 4 screws and swing up on hinges (rack guides may be used as prop). It is advisable to occasionally remove fan from shaft as concave fan blades tend to collect grease thus lowering efficiency of fan circulation.

SEASONAL SHUT-DOWNS

Clean as previously instructed. Use a mineral oil on entire inside surface.

NOTE: If possible, keep pilot light lit. If unable to do so, seal all exterior oven openings with water proof paper.
Prior to starting: Wipe surfaces with clean cloth (if necessary use solvents). Remaining residue will burn off during first light-up.

TIPS ON USING OVEN

1. In general, reduce temperature 25° - 75° from conventional recipe.
   a. Bakery products, reduce temperature 50° to 75° . For short-time baked products such as cookies, reduce 25°. Time 25 to 33% less.
   b. Casserole cookery, reduce temperature about 25° and time 25 to 50%.
   c. Meat roasting, reduce temperature to 275° - 300° . Use meat thermometer. Time may be reduced up to 60°
2. Check product in 1/2 stated time on regular recipe.
3. Use fan for preheating and baking at all times.
4. For less browning, lower the temperature; for more browning, increase the temperature.
5. Pans used affect baking time and results, a light shiny pan reflects heat; a dark dull pan absorbs heat.
6. When baking Fruit pies - use pan on rack & set pie tins on top of pan. This will give better bottoms and also catch boilovers.

Fan Shuts Off, Light in Oven On

1. Door open
2. Door Switch needs adjusting.
3. Motor overheating from lack of circulation comes on when motor is cool.
4. Loose connection.
5. Fan or Door switch defective.

Fan Wont Shut Off When Door Opens

1. Door Fan Switch needs adjusting or replacing.
2. Cooling Switch on.

Fan and Light Off

1. Circuit Breaker in building off.
2. Plug pulled.
3. Switch defective.

Burner Pilot Goes Out.

1. Gas shut off.
2. Minimum flame set too low and blows it out upon ignition of main burner.
3. Poor draft-snuffs out flame.
4. Too much draft-pulls flame away from thermocouple.
5. Pilot flame too low,
6. Thermocouple connection on safety pilot loose.

Burner Fails To Light Though Pilot Lit. (Gas Thermostat)

1. Gas valve off.
2. Orifice plugged.
3. Thermostat completely out of calibration.

Electric Thermostat

1. Electric plug out.
2. Electrical terminal loose.
3. Defective solenoid valve.

Oven Burner Wont Shut Off or Oven Gets Too Hot. (Gas Thermostat)

1. Oven Thermostat out of calibration.
2. Minimum flame too high. (Do not lower under 1/4")
3. Broken capillary tube.
4. Dirt under Thermostat valve seat.

Electric Thermostat

1. Oven Thermostat out of calibration.
2. Broken capillary tube.
3. Wire shorting across thermostat terminals.
4. Dirt under seat of solenoid valve.

Oven Controls Overheating

1. Holes in top covered. (see Page 10)
2. Range installed on control side conducting heat to control compartment. (insulate side of oven.)
3. Oven sitting flat on curb. (oven should have 1" toe base installed under or be set on legs.)
4. Poor flue-Heat coming out front of burner compartment and being pulled up into control compartment.

Poor Heat Distribution-Hot Spots (See Baking Difficulties)

1. Too low gas input.
2. Thermostat out of calibration.
3. Fan not on.
4. Too much draft or too little draft to flue.
5. Poor seal across center of door
6. Baffle too far from fan.
7. Foreign matter or obstacle in fan wheel or back of baffle.
8. Fan loose on shaft.
9. Using too high a temperature.

Oven Takes a Long Time and/or Wont Reach Temperature

1. Oven out of calibration.
2. Orifice too small for gas pressure.
3. Gas pressure too low.

Door Sticks or Not Closing Properly. (Vertical Door)

1. Gear Rack interfering with spring assembly arm.
2. Broken spring.
3. Door out of synchronization.
4. Upper door hits top before stops on lower door makes a contact.

BAKING DIFFICULTIES & PROBABLE CAUSES

Uneven Bakes

1. Insufficient heat input.
2. Faulty flue.
3. Warped pans.
4. Warped oven racks.
5. Uneven loading of pan or pans.
6. Fan off.
7. Oven not level causing dough to run to side or rear of pan.

Spotty Pie Bottoms

1. Over worked pastry.

Spotty Bread

1. Over worked Dough.

Burned goods, cripples

1. Incorrect temperature.
2. Thermostat out of calibration.
3. Left in too long.
4. Improper scaling.

Dried Out Goods

1. Too low temperature.
2. In oven too long.
3. Baking with fan off.
4. Improper mix.

Alternately Good and Poor Results

1. Poor flue.
2. Fluctuating gas pressure.
3. Fan off and on.
4. Improper scaling and control of ingredients.

Side Burning

1. Insufficient gas input.
2. Gas fluctuating in pressure.
3. Fan off.
4. Poor burner adjustment
5. Oven not level.
6. Too strong a draft in flue.

Lack of Uniformity, same pan.

1. Uneven loading in pan.
2. Faulty pans.

Lack of Spring

1. Over proofing.
2. Incorrect temperature.

Cracked Cakes

1. Too high temperature.
2. Too fast cooling.

Underdone Pie Bottoms. (Advisable to bake on cookie sheet)

1. Pastry too rich.
2. Pastry too thick.
3. Warped pie tins (when used on cookie sheet)

Heavily Colored Pie Rims

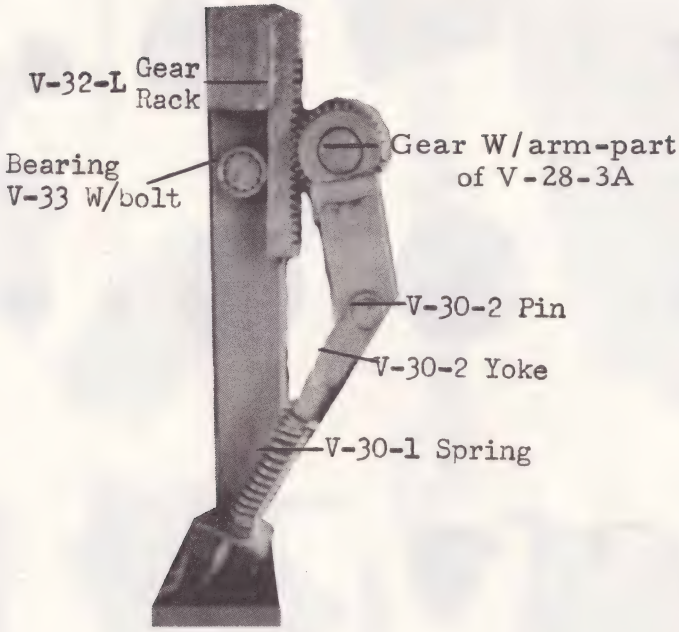
1. Air bubbles enclosed in pastry when crimped.

Uneven Baked Cookies

1. Not scaled properly.
2. Fan off.

PARTS

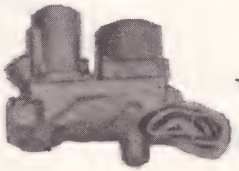
Spring Assembly



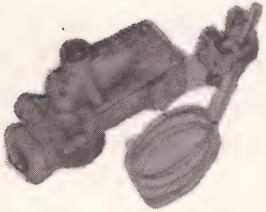
V-27-3A V-28-3A V-127-3 V-128-3

V-1G

V-1E



V-2E



V-2GR

V-2GB

V-2EG-1

V-2EG-2

V-2EG-3

V-3G

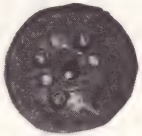
V-4G

V-4E

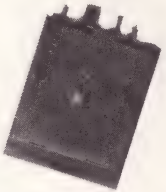
V-5G

V-16-3

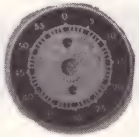
V-18



V-24-A



V-24-B



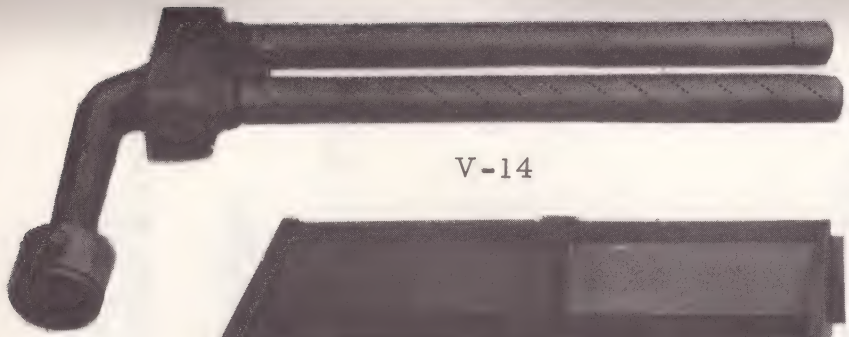
V-24-A2

V-24-B2

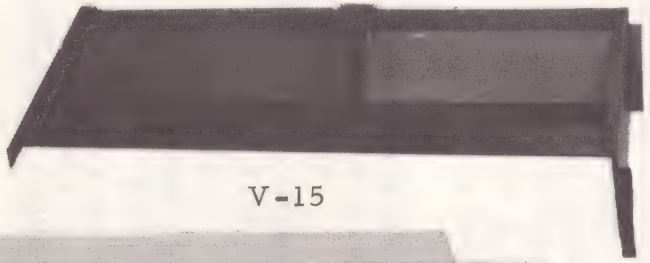
V-24-A1

V-24-B1

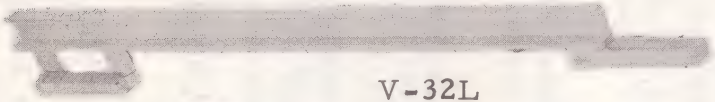
V-33



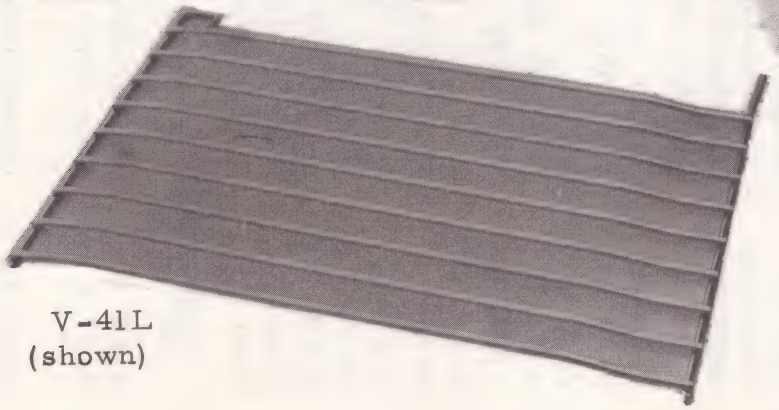
V-14



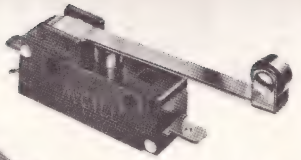
V-15



V-32L



V-41L
(shown)



V-118

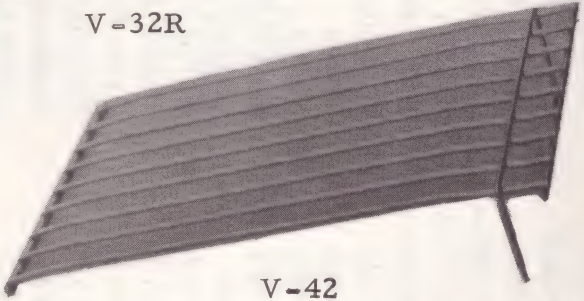
V-128

V-17-1

V-130-1

V-133

V-32R



V-42

PART NO.	DESCRIPTION
V-1G	Thermostat (Gas)
V-1E	Thermostat (Electric)
V-2GB	Safety Pilot (Baso)
V-2E	Safety Pilot & Solenoid Valve (Baso)
V-2EG-1	Thermocouple (P17)
V-2EG-2	Pilot Valve
V-2EG-3	Pilot Burner
V-3G	Pressure Switch
V-4G	Valve
V-4E	Valve
V-5G	Valve Handle (B38) for V-4G
V-8	Orifice (Main burner)
V-14	Burner Complete
V-15	Baffle Burner S/S
V-16-3	Pilot Light-Burner
V-17-1	Switch, Light, Fan-Cooling
~~V-18~~	~~Switch-Door~~
V-20	Light Globe
V-23-1	Motor (New)
V-23-1M	Bearing-Motor (Fan end)
V-23-1I	Bearing-Motor
V-23-1D	Capacitor-Motor
V-24-A	Timer Less/Knob
V-24-A1	Knob only
V-24-A2	Dial
V-24-B	Electric Timer less/Knob
V-24-B1	Knob only
V-24-B2	Dial
V-26	Fan W/Set Screws
V-27-2	Window
V-28-2	Window
V-29	Oven Door Handle (B89)
V-40-1	Racks (Oven) 26 3/4" Wide x 26" Deep
V-41-1	Guides (Oven Rack) L or R.

HORIZONTAL DOOR (Mention Change No.)

V-18	Switch-Door
V-27-1	Oven Door, Upper (Complete W/Gear, bearings & Window)
V-27-3A	Upper Door Trunnion W/Bearings & Gears.

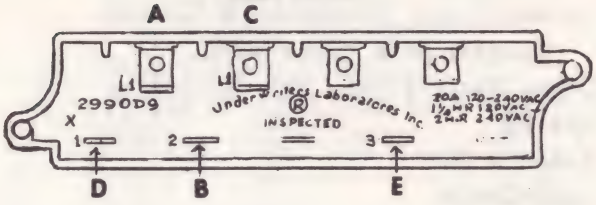
V-28-1	Oven Door, Lower (Complete W/Gear, bearings & Window, less Handle)
V-28-3A	Lower Door Trunnion W/Gears, bearings & Gear arm.
V-30	Oven Door Yoke, Pin & Spring
V-30-1	Spring
V-30-2	Yoke & Pin
V-31-1	Seal-Door
V-32-L	Gear Rack Left (arm)
V-32-R	Gear Rack Right (arm)
V-33	Ball Bearing
V-34E-2	Panel-Upper Control (Electric)
V-34G-2	Panel-Upper Control (Gas)
V-35E	Panel-Lower Control (Electric)
V-35G	Panel-Lower Control (Gas)
V-36L	Panel-Gear (Left)
V-36R	Panel-Gear (Right)
V-37-1	Panel Door-Fire

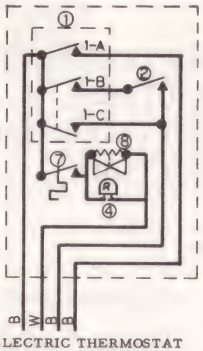
VERTICAL DOORS (Mention Change No.)

V-127	Turn Buckle
V-127-1	Oven Door, Left W/Window, less Trunnion
V-127-3	Trunnion W/Sprocket, Left
V-128	Chain, L or R Door
V-128-1	Oven Door, Right W/Window, less Handle & Trunnion,
V-128-3	Trunnion W/Sprocket, Right
V-130-1	Spring-Door, Upper or Lower
V-131	Seal-Door
V-131-1	Seal-Door-Sides
V-133	Bearings - Ball, Door
V-134E	Panel-Upper Control (Electric)
V-134G	Panel-Upper Control (Gas)
V-135E	Panel-Lower Control (Electric)
V-135G	Panel-Lower Control (Gas)
V-137-1	Panel-Door-Fire
V-118	SWITCH-DOOR

CONTROL CIRCUIT

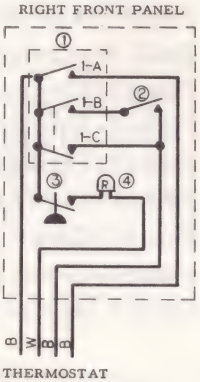
PART V-17-1





ELECTRIC THERMOSTAT

1. Switch #V-17-1
   - A Light
   - B Fan
   - C Cooling
2. Switch, Door #V-18/V-118
4. Light, Burner
7. Thermostat #V-1E
8. Solenoid & Valve #V-2E

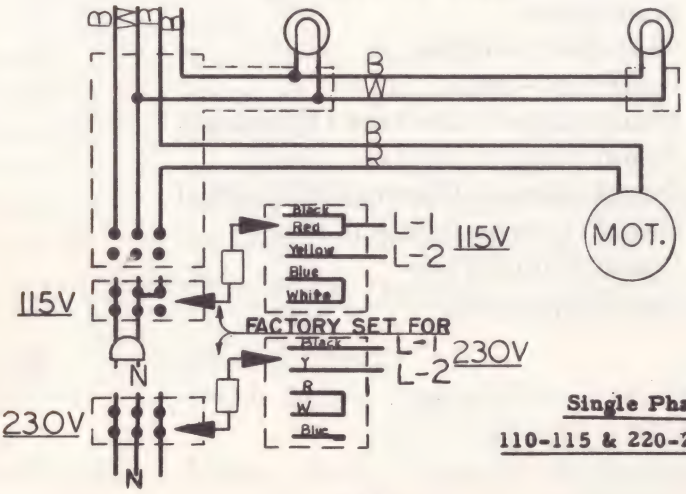


GAS THERMOSTAT

1. Switch #V-17-1
   - A Light
   - B Fan
   - C Cooling
2. Door Switch #V-18/V-118
3. Pressure Switch #V-3G
4. Light, Burner #V-16-3

Units equipped with Electric Timer see Page 34.

SINGLE PHASE

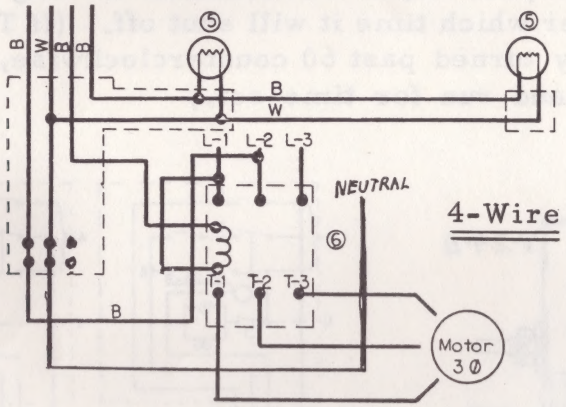


Single Phase

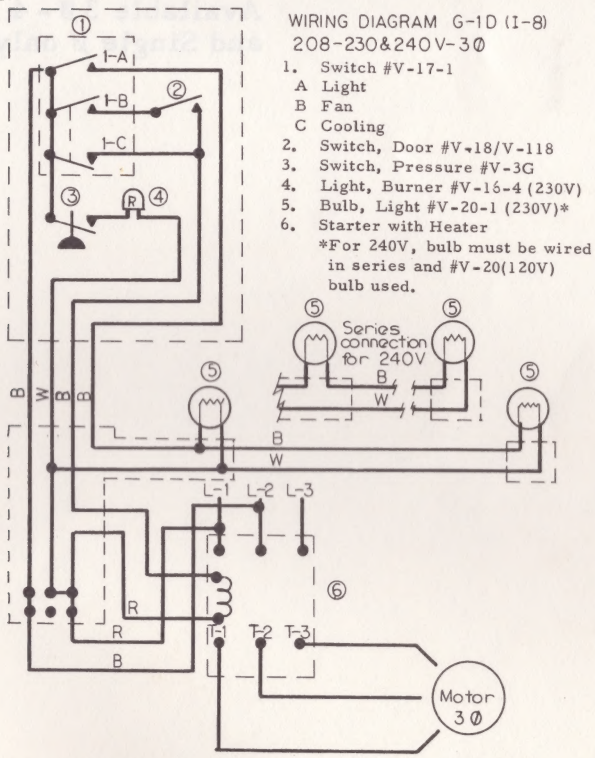
110-115 & 220-230V AC

THREE-PHASE

3Ø - 4 Wire-Electric or Gas Thermostat, also for electric timer. Refer to Control Circuit for 1Ø for balance of wiring diagram.



3Ø - 3 Wire Gas Thermostat



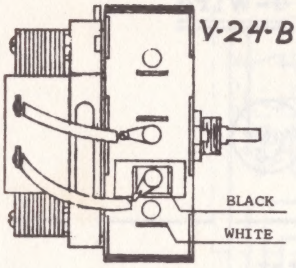
WIRING DIAGRAM G-1D (I-8)
208-230&240V-3Ø

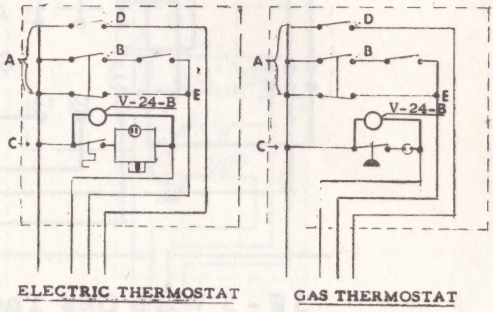
1. Switch #V-17-1
   A Light
   B Fan
   C Cooling
2. Switch, Door #V-18/V-118
3. Switch, Pressure #V-3G
4. Light, Burner #V-16-4 (230V)
5. Bulb, Light #V-20-1 (230V)*
6. Starter with Heater

*For 240V, bulb must be wired in series and #V-20(120V) bulb used.

V-24-B TIMER

Turn Timer to desired time. When number of minutes is up, Timer will ring. If Timer is not shut off by turning to past off, it will continue to ring for 5 minutes, after which time it will shut off. (If Timer is accidently turned past 60 counterclockwise, it will start up and run for time set.)





Available 3Ø - 4 Wire and Single Ø only.

IMPORTANT: To eliminate mistakes and delay, give the following information,

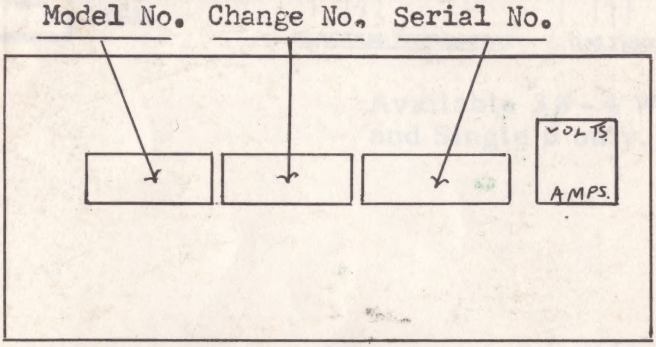
Serial No. _____

Model No. _____

Change No. _____

For__ NAT. ☐ MFG. ☐ BUTANE ☐ PROPANE ☐

Name & No. of Part



Vectaire Name Plate